



adept
introduces...

Adept Solutions For Food Packaging

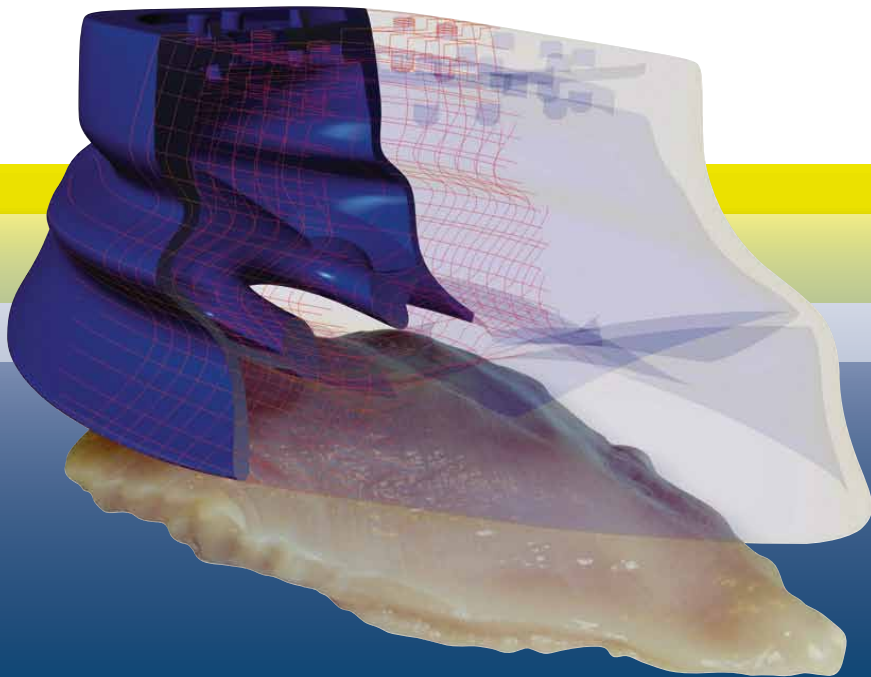


Challenges of Primary and Secondary Food Packaging

Changes in consumer buying habits, labor shortages, and tightening of governmental safety and hygiene requirements, food processors worldwide are turning from hard automation and manual processes towards flexible robotic primary and secondary packaging.

Primary food packaging must meet food safety regulatory requirements such as those now in place with the Food Safety Modernization Act impacting any products sold into the United States. Secondary packaging solutions often must align with retailer requirements for packaging design, materials and shelf-life limitations.

For primary or secondary packaging processes that require repetitive, manually intensive product handling, automation with robotics is the ideal solution, potentially yielding significant productivity gains while handling the most delicate of food products with flexibility, speed, care and repeatability.



Solving packaging challenges for diverse product types – with speed, flexibility and food-safety in mind.

Robotics For Food Packaging

Compared with manual labor, robotic systems enable greater throughput, higher yields, and more reliability. Robots rapidly and consistently maneuver products, make efficient use of floor space, and quickly adapt to product, packaging pattern and container changeovers through integrated vision technology. Adept Robots are now widely used in food packaging in many categories, including fresh produce, processed foods and meat, fish and poultry.

Adept Technology has taken the lead in automated food packaging with industry-specific flexible solutions that provide:

- **Precision handling of non-uniform food product**
- **High-speed, reliable throughput**
- **Lowest contamination risk**
- **Uncomplicated integration and deployment**



Speed, Reliability and Food-Safety Acceptance

Based on the Adept Quattro™ s650HS robot, Adept packaging solutions ensure food safety with the highest possible speeds for primary and secondary food handling, and assure precise pick-and-place action. The Adept Quattro s650HS is the only high-speed parallel robot to receive **USDA acceptance** for meat and poultry processing.



"Transitioning to the Adept systems gave us the gentle handling we needed to redesign our clamshells. We used to have a shrink band on the clamshell, which we wanted to eliminate to take PVC out of the environment. Our new patented clamshells feature a lid that's sonically welded to the tub. The Adept system is gentle enough to lift the clamshell by its lid and not break the easy-open perforation."

Joe Torquato – Director of Engineering – Earthbound Farm



SoftPIC™ Gripping and Grasping with Dexterity and Control

Adept's advanced vision and gripping/grasping technology allow for location and handling of randomly presented, non-rigid, wet and irregularly-shaped food products – previously possible only with manual handling. Custom-molded SoftPIC™ grippers conform to all shapes and sizes and support the handling of different products in a variety of packaging patterns from a single production line previously an impossible task for automation.

Packaging Automation Software

Adept is a world leader in robotic vision guidance for flexible, high-speed handling and packaging applications. ACE PackXpert™ is a powerful software solution for the rapid development of robotic packaging applications. The software architecture is intuitive, flexible, and configurable, eliminating the need for lengthy, overly-complicated programming.



Meeting Sustainability Objectives Through Food Packaging Automation

Integrated Vision and Conveyor Tracking

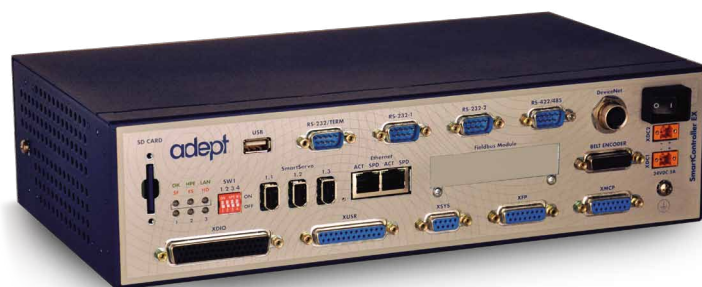
Adept has over 20 years of proven expertise in seamlessly integrating robotic motion, vision guidance and inspection, and conveyor belt tracking into a common controls environment. Our high-speed conveyor tracking is ideal where robots must package products that are presented randomly on a moving conveyor belt and is supported in all Adept products.

Adept intelligent robotics enable companies to achieve sustainable processes by addressing the complex packaging challenges of today, while preparing for the challenges of tomorrow. Our flexible automation solutions help packagers achieve a sustainable balance by addressing three common strategic goals:

- **Preservation of resources by reducing scrap, and supporting the move towards lightweight and eco-friendly materials**
- **Protection of products, consumers and employees from contamination and work-related injuries**
- **Improved profitability by increasing production and flexibility to maximize capital investment**

Open Controls for Performance and Control

The Adept SmartController EX platform offers real time integration of high-performance vision, robot control, and line tracking, all within a compact, highly-reliable package. It also provides seamless integration with PLC and PC-based architectures. Extensive built-in features deliver the highest performance and reliability, with the ability to control up to 24 axes of motion. Using industry standard communication tools such as OPC, Ethernet, RSLogix™, DeviceNet, TCP/IP, and IEEE-1394 tight integration with machine and factory networks is possible, for efficient information flow, unmatched performance, and superior maintainability of your food packaging system.



Integrating Automation of Food Packaging into the Manufacturing Process



Robots are just one component of complete flexible food packaging solutions. Tight integration with existing factory networks and plant-wide material flow are just as important. To meet these needs, Adept is aligned with a team of Adept Preferred Systems Integrators – industry-leading food packaging machinery and systems integration companies to deliver the most comprehensive and flexible packaging solutions on the market.

Proven Technology for Today's Food Packaging Needs

Adept Technology has been inventing, manufacturing and deploying intelligent vision-guided robotics for three decades. As the first industrial robot company to offer fully integrated vision and conveyor tracking, Adept has the largest global installed base of vision-

guided robotic systems for packaging. Adept offers a broad range of high-performance robots for handling, packaging, and palletizing applications – all operated with the same compact control system and all capable of adapting to the dynamic needs of today's food packaging environment.



"When we are selected to solve primary or secondary food packaging challenges, Adept equipment and technology are at the top of a very short list of options. With Adept in the mix, our packaging solutions are developed and delivered using the latest innovations in robotics and cost-saving equipment offerings, resulting in significant flexibility, reliability and productivity gains by our clients."

Michael Kim – Han Shin Power Co., LTD



If you believe automation for food packaging should be fast, uncomplicated and sanitary – that's the way it's done at Adept. Our robotic systems are moving the food industry at blazingly high speeds. Gently. Flexibly. Cost effectively.

Contact us today...and grasp what our ideas can do for you.



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